NOTES AND MEMORANDA.

SELIGMAN'S PRINCIPLES OF ECONOMICS; A REPLY AND A REJOINDER.

To reply to a book review is usually a task as unprofitable as it is ungracious; but the note in the August number on my *Principles of Economics* is of such an extraordinary character, and deals at bottom with questions of such moment to the discipline in general, as to compel some rejoinder.

The review unfortunately starts with a misconception. The very first sentence reads, "Professor Seligman's volume is designed to be a text-book." This is a mistake. It is not primarily intended to be anything of the kind. My object in writing the book was to give in compact shape a survey of the entire field of Economics (as distinct from Finance) for the average intelligent reader of mature years who might be interested in the general subject, and to restate the principles of the science in a form that might be in harmony with recent progress in economic thought. In most of the reviews this has been clearly recognized; and it is a source of regret that Professor Taussig should have separated himself to such an extent from virtually the whole mass of other critics as to put the emphasis on the wrong aspect. The only book in the English language of the last twenty years which has endeavored to cover the field of Economics without being designed primarily as a text-book is that of President Hadley; and the time had seemed to come to attempt the task anew. If incidentally the volume should prove serviceable as a text-book, it would naturally be a source of gratification. But to review it as representing something which it was not primarily designed to be involves, to say the least, a serious misconception.

As Professor Taussig has, however, chosen to discuss it only in that aspect, this rejoinder will attempt to meet him on his ground. The strictures of the first few pages of the review deal with a consideration of the order in which the topics are presented. This entire criticism can be brushed aside very lightly for the reason that the question of arrangement is largely a matter of individual choice. It is indeed true that there is no order which is entirely free from objections. Economics is like a circle, and almost wherever we touch it we find that we might have reached the centre equally well from some other point. Were it worth while, numberless illustrations might be given of the fact that there is scarcely a single topic found in the older text-books which could not with equal or greater propriety be discussed somewhere else. Much as all the recent works on economics—from Marshall to Fetter—differ from each other, they are all agreed that the older arrangement of topics, to which Professor Taussig so tenaciously clings, is bad.

There is, however, one consideration which the experience of years has impressed upon me. Professor Taussig says very truly, "Our subject offers peculiar opportunities for training people to think." But for economics to be of any use, even to the "youths and maidens" of whom Professor Taussig speaks, it is important to approach it from the correct point of view. To regard economics simply as a logical discipline is to commit the mistake which brought some of the so-called classical economists into deserved disrepute, and which with even some writers of to-day converts the science into a field of logical legerdemain and hair-splitting subtleties. Surely, it is far better to lead the student up to an appreciation of the fact that in economics, as in all other social sciences, the present is a child of the past, and that no economic analysis is worth having unless it is an outgrowth of actual rather than hypothetical phenomena and unless it is applicable to conditions as they really exist. This is the justification for prefacing the discussion of principles by a presentation

of the historical development and by a consideration of the general framework of society within which the specific tendencies known as economic laws are at work. Having tried both methods, I am free to say not only that the order of topics suggested in the book makes the subject a far more interesting one to the students, but also that it succeeds in giving a concreteness to the exposition which cannot be so well attained in any other way. Whereas students were formerly repelled by the apparent unreality of the whole subject, they are now attracted, and are encouraged to pursue their studies farther. My own experience, reinforced as it is by that of other academic teachers, shows that to regard economics primarily as a logical discipline and thus to neglect the point of view is to rob the science of half of its interest and usefulness.

All these points, however, being matters of individual preference on which one teacher's word may be deemed as good as another's, would not have sufficed to call forth this rejoinder. Nor is this the place to devote any time to Professor Taussig's next point, which is concerned with my agreement in part with some of Professor Clark's theories. Professor Clark is quite capable, if so disposed, of taking care of himself and of the misconceptions of his thought in which the criticism abounds. I should like to observe, however, that to object to a book because it accepts some conclusions which the critic "finds difficulty in following" may be more damaging to the critic than to the conclusions in question. A distinguished predecessor of Professor Taussig in the same university—Professor Agassiz—"found difficulty" in following the views of Darwin; and every belated defender of outworn doctrines finds equal difficulty in adjusting his mental perspective to a new horizon. Unfortunately for Professor Taussig, the current of modern economic opinion is overwhelmingly in the direction which he deprecates.

Professor Taussig's chief grievance with the book, however, is that it contains some passages where "either the reasoning is at fault or else the exposition so brief that it

is impossible to make out just what the reasoning is." This is a more serious indictment.

The first alleged instance is the rather technical passage where it is said that "if in the case of five apples the marginal utility of each is five units of satisfaction, that of the stock will be five times five, or twenty-five; but if in the case of eight apples the marginal utility of each falls to three, that of the stock will be eight times three, or twenty-four. Yet the total utility of eight apples is certainly more than that of five." Professor Taussig triumphantly asks, "Do we apply the notion of marginal utility to a stock, or measure total marginal utility as distinguished from total utility?" If "we" denotes Professor Taussig, the answer is probably "no"; but, if "we" denotes the economists who have grasped the real meaning of marginal measurement, the answer is unquestionably "yes."

Surely, it is not so "difficult" to "follow" the proposition that we can take any unit from a stock, measure its marginal utility, put it back and take another for a similar measurement, proceeding in the same way until we have measured all the units by the marginal test. Manifestly this would give an aggregate made up of marginal utilities, and this aggregate is best termed the marginal utility of the stock, which is the basis of value. The marginal utility of a stock is therefore a phrase intended to designate the utility of the marginal unit multiplied by the number of units. Whatever name we apply to this form of utility, it is something quite different from the total utility of a stock; for this is reached by adding together the utility of the various increments considered not as marginal units, but as successive units. We can measure utilities in either way, but only in the case of the total utility of a stock is there any question of consumers' surplus in the earlier increments. Total utility and consumers' surplus, however, play no rôle in affecting value and price. To the extent that economics deals with problems of value, the real criterion is the marginal utility of the commodity or the stock. Where there is a large crop of wheat, for instance, the total utility of

the stock—that is, its efficacy in satisfying the hunger of the community—is indubitably greater than that of a smaller quantity; but the marginal utility of the stock—*i.e.*, the aggregate of the utilities of all the units, each considered in turn as the marginal one—may be smaller than before, and the value or price of wheat will, in that case, fall.

What shall be said of a criticism which, at this late date, sees in value nothing but the ratio of exchange of a stock, and which fails to recognize that this exchange ratio measures something in the thing exchanged as well as in the other things with which it is compared? And what shall be thought of the courtesy of a criticism in making the extraordinary accusation that an author "seems to confound total exchange value with total utility" in the face of the author's categorical statement in the very same section that value is not based on total utility, and in view of the fact that on the very next page the author in question is at some pains to show that careless thinkers often confuse the two meanings of margin,—the economic and the non-economic margin. For it is inattention to this warning that is responsible for Professor Taussig's misconceptions in his criticism of the theory of value as well as that of distribution, notably his comments on wages.

About a decade ago, in an article on the theory of railway rates, where Professor Taussig labored vigorously to deny that they were in any way based on utility, he showed that he had not completely mastered the theory of marginal utility. In the intervening decade he has evidently learned to appreciate the bearing of the conception on particular units of a stock. Is it too much to hope that after another decade he may find less "difficulty" in "following" the doctrine as applied to a stock as well? The conception itself, whatever name we give it, is unquestionably as applicable in the one case as in the other, and is always to be sharply differentiated from the total utility of the stock. In fact, without this conception the whole theory of the equivalence of value and marginal utility falls to the ground.

The next point adduced by Professor Taussig is the

inclusion of the phenomenon of "dumping" under the head of joint cost. Professor Taussig objects that the theory of joint cost refers to *different* commodities, while "dumping" refers to different units of the *same* commodity. It is with great regret that I am again compelled to differ with him. There is no distinction between the two cases, so far as the theory of joint cost is concerned. Different increments of the same commodity *that finally reach the market under different conditions* are, economically speaking, different commodities and are equally subject to the law of joint cost. Professor Taussig has placed himself on record as maintaining that the explanation of railway charges is the theory of joint cost. Yet it is an egregious error to think that the putting of silk and cotton into different classes is an instance of the production of technically different commodities. What is paid for is not silk and cotton, but the service of transportation, and the *service* itself remains technically the same. The phenomenon falls under the head of joint cost, because the successive units of this same service, when applied under different conditions, become, economically speaking, different services. What is produced is a place utility, which, although technically the same, attaches in various degrees to different articles, and thus completes their production in an economic sense.

But even if it should be claimed that the product or service is technically different simply because the commodities carried are different, it need scarcely be pointed out that railways not only put different goods into different classes, but also put the *same* goods into different classes. The identical commodity pays a different rate according as it goes by fast or by slow freight, on a through or on a local tariff, in carloads or in less than carload lots; and where the railroad also conducts the express business, as abroad, according as the goods go by freight or by express. Will Professor Taussig maintain the thesis that the classification of *different* commodities is an example of joint cost, and that a similar classification of the *same* commodities is not such

an example? And, unless he takes this clearly untenable position, how can he successfully dispute the applicability of the theory of joint cost to dumping? The foreign stock may be "dumped" abroad year after year, and will then be sold permanently under different conditions from the domestic stock, just as the same commodity is carried by freight under different conditions from express; just as the identical service—transportation—is sold at different rates when applied to silk and to cotton. To any one not so strongly under the obsession of old-time ideas it is clear that the theory of joint cost is of far wider application than Professor Taussig dreams of.

After this, it is almost unnecessary to notice the second part of the paragraph in which the critic deplores such "curious" reasoning as is implied in the statement that the sale of a part of the stock abroad at lower prices does not necessarily mean that the domestic prices are for that reason higher than they would otherwise be. He asks, again triumphantly, "Does the diminution of the supply sold in the domestic market really make prices lower at home, or does it make them higher, as it is clearly meant to do" [by decreasing the supply]? Suppose the retort were made, "Will the fact that a railway puts on a new accommodation train induce it to exact a higher charge than before for the express service, because the number of express travellers is now diminished?" Yet the question would be equally pertinent, and the implication equally convincing. In fact, just as the accommodation train will cause the carrying of additional passengers who would otherwise not have travelled at all, so the habitual "dumping" or sale of products abroad at a lower price may mean the total marketing of more goods than before, at a lower price all around.

Professor Taussig proceeds, "And is there some immanent force which compels manufacturers to engage in unremunerative production?" Suppose the retort were again made, "Is there some immanent force which compels railway managers to carry coal at rates which, if extended

to all traffic, would bankrupt them?" Of course the answer to both questions is that the "immanent force" is the desire to make money. The manufacturer charges less for the goods sold abroad for the same reason that the railway charges less for coal; namely, because the traffic will not bear the higher charge,—*i.e.*, because the conditions of competition abroad do not enable him to exact a higher price. Yet as long as his foreign sales net him more than mere constant expenses, composed in large part of fixed charges, they will contribute to that extent to his variable expenses, and thus enable him to sell the domestic goods at lower prices than he otherwise could; just as the low rates on coal, although unremunerative if applied to all traffic, will make the rates on silk lower than if the coal were not carried at all. Professor Taussig has fallen into the same trap as the ordinary man who thinks that the low rates on coal are at the expense of the high rates on silk. "What becomes of our reasoning as to marginal utility?" asks Professor Taussig. Were this a case for facetious treatment, it might be said that, if the logic just adduced is "our reasoning," I am delighted to waive all claim to it in favor of Professor Taussig. Seriously speaking, however, an economics which is not a mere logical exercise, but is based on a first hand acquaintance with the practices of large business enterprises, would have taught Professor Taussig that what he criticises is a commonplace among intelligent manufacturers, and would thus have preserved him from what is, I regret to say, assuredly an exhibition of "curious" reasoning.

Finally, Professor Taussig calls attention to the "inexplicable slip" of stating that in 1900 "there were six classes of manufactured products in the United States, each aggregating over half a billion dollars in value, as against one agricultural product and no mineral product," and he gently adds that "the figures supporting the statement appear on the briefest examination to be worthless," because they give the gross value of manufactures with no allowance for materials used. With all due deference, again, it may

be asked, Why should the gross figures not be used? In fact, for the purposes of the illustration the gross figures are precisely the ones that ought to be used. The growth of manufacturing enterprise is attested by the amount of capital invested, the number of workmen, the size of the premises, the extent of the sales, etc. Manifestly, all these are apt to grow with the amount of the raw materials used; and the gross product is an excellent indication of the importance of the industry. Professor Taussig objects that "by this sort of calculation the cotton manufacture would invariably be found a more important industry than cotton growing." In all good nature, again, let me call attention to the "curious" reasoning here involved. When the South sends most of its raw cotton to Europe and the North, does the gross value of the cotton manufactures of the South exceed that of cotton growing? When the United States exported a large part of its wheat or of its pig iron, did the gross value of the flour output or of the iron manufactures exceed that of the raw materials? On the contrary, the growth of manufacturing industry is best illustrated by the extent to which raw materials are used at home in lieu of being sent abroad. The meaning of the industrial transition in the United States is that we are exporting less of our raw materials and more of our manufactures. To illustrate this tendency, the figures of gross value are the really significant ones. What is to be thought of a criticism which so wofully misconceives the very elements of the problem, and which so totally overlooks the question of domestic *versus* foreign utilization of raw material? And what shall be said as to this critic's right to accuse an author of the lack of "careful and consistent thinking"? Surely, such epithets ought not to be bandied so recklessly and on such flimsy provocation. Far from being an "inexplicable slip," as Professor Taussig has so hastily claimed, it is no slip at all, and stands in no need of explanation except to those who maintain that "cotton manufacture would invariably be found a more important industry than cotton growing."

Professor Taussig closes his genial criticism by deploring the fact, which he states "with great regret," that on the whole the book must be adjudged "not commendable for use with students." In a sense it might be called a matter of comparative indifference to me whether it is used as a text-book; for such was, as indicated above, not its primary purpose. But it must be confessed that the spread of the doctrines contained in the book is not a matter of indifference to me. And lest some, who might otherwise be tempted to read the book, may be deterred by Professor Taussig's adverse opinion, I venture, although with great reluctance, to cull two extracts from the many reviews which have treated *among other aspects* its serviceableness as a text-book. The leading scientific journal of Economics in Great Britain says in the course of a long review, "We regard the whole book as the most important and compact of aids to the diffusion of a lively and instructed interest in Economics which has yet enriched the scientific literature of the Anglo-Saxon peoples." While one of the leading economic reviews of the continent says: "Such is the work of which it is impossible adequately to praise the elevated tone, the precision and sureness of the proofs, the lucid simplicity of the exposition. In its concise form it is undoubtedly the best text-book that exists at the present time in any country of the world, without exception."

After such expressions, which I should otherwise feel much embarrassment in repeating, I am quite content to leave the question of deciding between the conflicting opinions to my colleagues. But, since Professor Taussig well remarks that in such matters "we economists ought to deal frankly one with another," I cannot refrain from making the very frank statement that an unfavorable judgment based on such unpenetrating and misplaced criticisms as those discussed above does not deserve to be taken too seriously.

EDWIN R. A. SELIGMAN.

COLUMBIA UNIVERSITY.

I regret to have been misled into thinking of Professor Seligman's book as primarily a text-book. Possibly others also have been misled. It has no preface or explanatory statement from the author; and it has an apparatus of bibliography and references (very good ones) of the kind one expects in a text-book. The publishers systematically put it on the market as such, and in their advertisements (I have before me one of their circulars) state that it is "intended *not only* for the college student," but for others also. I am in entire agreement with what Professor Seligman says as to the desirability of keeping our treatment close to the actual facts, and of not regarding economics "simply as a logical discipline"; nor am I aware of having said or implied anything to the contrary.

I will say nothing on the question of general competence, on which Professor Seligman touches, but will confine myself to a few words on some of the specific topics discussed by him, and with these will close the controversy.

(1) "Total marginal utility" seems to me either a superfluous phrase or an inaccurate one. If the utility or satisfaction from each unit of a given stock is believed to be the same, total utility is easily measured, the number of units being multiplied by that constant. This is not my own view, but it is a tenable one. Total utility is then measured perfectly by exchange value; there can be no difference between total utility and "total marginal utility"; and the latter seems to me a superfluous phrase. If, on the other hand, the utilities from the several units of a stock are believed to be different,—if some are thought to yield more satisfactions than others, and thus to bring a consumer's surplus,—total utility is not measured by exchange value. This is my view: I believe there is such a thing as consumer's surplus, even tho it is not susceptible of precise measurement. In this view, there is no such thing as total marginal utility. The term "marginal utility" is applicable only to the utility of the last unit, or of any one unit; I cannot conceive what is then meant by total marginal utility.

That my understanding of the doctrine of marginal utility

is different from Professor Seligman's is impressed on me by a passage in that very discussion of the economic and the non-economic margin to which he refers in his reply. He says (*Principles*, p. 178): "When the supply is limited, the diminishing utility of each increment will be arrested at a point below which the consumer will prefer to abandon the use of an increment for something else. The margin here is a margin of indifference between an increment of one commodity and an increment of another commodity. Since these increments are not necessarily the same, the margin of indifference may be reached at a point where the tenth increment of one commodity balances the twentieth of another, where, in other words, *the marginal utility of the first commodity is twice that of the second.*"[1] To me it seems plain that the marginal utility of the first commodity is precisely equal to that of the second. The satisfaction yielded by the tenth increment of the one is the same as the satisfaction yielded by the twentieth of the other; marginal utility is the same, and exchange value will be the same. *Ex pede Herculem!*

(2) As to joint cost and railway rates, Professor Seligman's rejoinder is a *tu quoque*. Here, he says, are commodities or services not of different kinds, but of the same kind, and to these I had myself applied the principle of joint cost. But are they the same? True, we apply to them a general phrase, saying that transportation always yields a "place utility." But these place utilities are by no means homogeneous. They are obviously different (as it seems to me) in passenger service from what they are in freight service. And, again, they are different for different kinds of freight service. All carriage of freight has a derived or indirect utility, resting on the utilities of the consumable goods or direct utilities that will eventually emerge. The utility of coal transportation is derived from that of the coal when it reaches its destination; the utility of a fast-freight fruit service is derived from that of the fruit at

[1] Professor Seligman, on my calling his attention to this passage, stated that the words *first* and *second* had been by accident transposed, and that these words would appear in the reverse order in later editions of his book. But otherwise he retains the passage as it stands.

destination. In the language of the business world, what the railway can charge for the coal and the fruit depends on what these articles will sell for when they reach the market.

It is not to be supposed, nor had I maintained, that the principle of joint cost explains *all* the peculiarities of railway rates. My paper on this subject is entitled "A Contribution to the Theory of Railway Rates," [1] and expressly disclaims telling the whole story. Thus, the difference between carload and less than carload rates, to which Professor Seligman refers, seems to me to have nothing to do with the principle of joint cost. It results from the simple fact that operating expenses are less per unit of freight when the car is full than when it is half full; when the freight comes in masses than when it comes in driblets. Classification, again, rests partly on the element of joint cost, partly on differences in operating expenses. Railway rates represent not a simple case of joint cost, but one complicated by other economic factors; tho I still believe that the influence of joint cost ramifies into almost all phases of this problem.

Professor Seligman apparently thinks that any industry having a large plant presents a case of joint cost. To me it seems that where a single commodity (*e.g.*, steel rails) is produced, even tho with large plant, the special causes influencing value under joint cost do not operate. The single commodity will be sold in a free market at one uniform price. Deviations from that price result from restrictions on freedom,—tariff duties and monopoly. But where two or more different commodities are inevitably produced together (*e.g.*, cotton fibre and cotton seed), whether with large plant or not, the prices at which each one will be sold will depend on the conditions of demand, *i.e.*, of marginal utility, for each separately.

(3) Dumping seems to me associated with monopoly conditions. Part of a supply may be sold abroad at a price that will meet prime cost, or current expenses, only. The rest of the supply must then be sold, in the long run, for more than total cost., *i.e.*, for more than current expenses

[1] In this *Journal*, vol. v., April, 1892.

plus fixed charges. The object of course is to gain from the extra profit on the domestic sales more than is lost on the foreign sales. Temporarily, in times of depression, even the domestic sales may be at less than total cost, or at no more than total cost; in which case the object of dumping is not so much to make an extra profit, as to diminish a loss from ill-advised or unfortunate production, by keeping down the domestic supply and keeping up the domestic price. In neither case can the domestic price be kept up, or the object attained, except by a combination, tacit or formal, of the domestic producers. That dumping is expected by those who practise it to make domestic prices lower, or that it leads to this result in fact, seems to me quite inconsistent with the facts.

(4) As to the statistics of manufacturers which I criticised, Professor Seligman seems to me partly to shift his ground. In his book I find no other explanation of them than that which I cited: they are offered to prove that "there were in 1890 six classes of manufactured products, each aggregating over half a million of dollars in value, as against only one agricultural product and no mineral products." In his reply he maintains still that "the gross product is an excellent indication of the importance of the industry," but adds another and a different explanation,—they are supposed to illustrate the fact that "we are now exporting less of our raw materials and more of our manufactures." Let the reader glance at these figures, which I reproduce in full as they appear in Professor Seligman's book (p. 105):—

Iron and Steel	804[1]	Carpentering	316
Slaughtering and Meat Packing	790	Woolen Manufacture	297
Foundry and Machine Shop,	645	Tobacco Manufactures	263
Men's and Women's Clothing	575	Boots and Shoes	261
Lumber and Timber	567	Malt Liquors	241
Flouring and Grist Mills	561	Cars	238
Printing and Publishing	347	Leather	218
Cotton Manufacture	339	Masonry	204
		Bread and Bakery	204
		Lead Smelting and Refining,	176

[1] The figures stand for millions of dollars of gross product in 1900.

Look at such items as Slaughtering and Meat Packing, Men's and Women's Clothing, Flouring and Grist Mill, Bread and Bakery, Carpentering. Do these figures of gross product give an "excellent indication of the importance of the industry"? Iron and Steel are credited with a product of 804, Foundry and Machine Shop with 645, while on the same page, under "Minerals," Professor Seligman gives Pig Iron with a product of 260. Are all three figures excellent indications of the importance of the industries? Figures of gross product are serviceable in comparing a given industry at one date with the same industry at another date; thus, in comparing the cotton manufacture in 1900 with the cotton manufacture in 1890. But they are misleading in comparing for the same date two very different industries, or sets of industries; thus, in comparing the Cotton Manufacture with cotton-growing, or Men's and Women's Clothing with wheat-growing. These identical comparisons are suggested on the same page of Professor Seligman's book, where cotton appears as a farm product with an output of 323, and wheat with one of 369. But even on his new ground — as to our exporting less of raw materials and more of manufactures—the figures, in my opinion, signify nothing. Why does Men's and Women's Clothing appear? Because we are exporting anything of the sort? What is the significance of Bread and Bakery, Printing and Publishing, Masonry, with reference to our imports and exports? Why does the Woolen Manufacture appear with a product of 297, no allowance being made for the wool used? Because we formerly exported wool? Professor Seligman knows that wool has never been exported from the United States. The simple fact is, I believe, that Professor Seligman, or some assistant of his, copied hastily from the Statistical Abstract and other familiar sources the figures that seemed large. Was it going too far to call them worthless?

F. W. TAUSSIG.

HARVARD UNIVERSITY.